

WHAT IS CLAIMED IS:

1. A method for forming a film, said method comprising the steps of:  
introducing a reactive gas into a reaction chamber;  
supplying a pulsed electromagnetic energy having a high frequency  
5 to said reactive gas sufficient to convert said reactive gas into a plasma; and  
forming the film on a surface of an object,  
wherein a photo energy is applied to said reactive gas during said  
pulsed electromagnetic energy to maintain an activated state of said plasma.